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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/621,752

07/16/2003

Reed A. Ayers

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1723

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EXAMINER

MARTINEZ, BRITTANY M

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

06/15/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/621,752	Applicant(s) AYERS ET AL.	
	Examiner BRITTANY M. MARTINEZ	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 25-31 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 12, 13, 15, 17, 18, 20 and 22 is/are allowed.
- 6) ☒ Claim(s) 11, 16, 19, 21, 24, 30, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 14, 21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/26/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Citation to the Specification will be in the following format (S. p. #, P) where # denotes the page number and P is the paragraph number. Citation to U. S. Patent literature will be in the format (Inventor, c. #, l. LL) where # is the column number and LL is the line number. Foreign patent literature will be in the format (Inventor, P) where P denotes the paragraph number.

Election/Restrictions

Upon further consideration of the restriction requirement made December 24, 2008, **Claims 24, 32 and 33** are considered to be linking claims between **Claims 1-23** on the one hand and **Claims 25-31** on the other hand. Accordingly, the restriction requirement has been modified and the new groups are as follows:

Group I: **Claims 1-23**; and

Group II: **Claims 25-31**.

Claims 24, 32 and 33 link inventions I and II.

Status of Application

Acknowledgment is made of Applicants' election of Group I, **Claims 1-23**, *without traverse* in the response filed March 24, 2009. **Claims 1-33** are pending in the instant application, with **Claims 25-31** withdrawn from further consideration pursuant to CFR 1.12(b) as being drawn to a nonelected invention. **Claims 1-24, 32 and 33** have been examined.

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121 or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e), 120, 121 or 365(c) as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosures of the prior-filed applications, Application Nos. 10/199,139, 09/957,829 and 60/234,841, fail to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Application Nos. 10/199,139, 09/957,829 and 60/234,841 do not provide support for any of the pending claims in the instant application. Thus, Applicants do not receive the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121 or 365(c) for Application Nos. 10/199,139, 09/957,829 and 60/234,841.

Claim Objections

2. **Claims 14, 21 and 23** are objected to because of the following informalities: in **Claim 14**, "has" should be changed to "having;" in **Claim 21**, "having" should be placed

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before “a second pore size” in the last line of part (i); and in **Claim 21**, “TCP” should be changed to “tricalcium phosphate” in order to allow for consistency with the rest of the instant application. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 11, 16, 19, 21 and 30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

5. The portion of **Claim 11** that reads “selected from the group consisting of...or” utilizes improper Markush terminology. See MPEP § 2173.05(h). This rejection may be overcome by amending the corresponding portion of **Claim 11** to read “selected from the group consisting of...and.”

6. **Claims 16 and 19** recite the limitation "said shaped mixture." There is insufficient antecedent basis for this limitation in **Claims 16 and 19**.

7. With regard to **Claim 21**, it is unclear whether “said compressing step” in line 29 refers to the compressing step of (b) or the compressing step of (f).

8. **Claim 30** recites the limitation "said alpha" in the 1st line of the claim. There is insufficient antecedent basis for this limitation in the claim.

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Claim Rejections - 35 USC § 102/103

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. **Claims 24, 32 and 33** are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Koblish et al. (US 2003/0138473 A1).

14. With regard to **Claims 24, 32 and 33**, Koblish discloses a porous tricalcium phosphate net-shaped material (Koblish, p. 4, 0031; Fig. 1).

15. **Claims 24, 32 and 33** are product-by-process claims. The process for producing the composition is held to be obvious, when the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983), and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir.1985). See also MPEP 2113.

Allowable Subject Matter

Claims 1-10, 12, 13, 15, 17, 18, 20 and 22 are allowed. The prior art of record does not appear to explicitly disclose a method of producing a porous tricalcium phosphate net-shaped material having an intended final shape, comprising: (a) preparing a reactant mixture comprising calcium oxide and phosphorus pentoxide, wherein the mole percent ratio of said calcium oxide and said phosphorus pentoxide allows the reactant mixture to form tricalcium phosphate upon combustion; (b) forming

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said reactant mixture into said intended final shape by placing said mixture into a combustible or noncombustible die having said intended shape and compressing said mixture; (c) if said die is noncombustible, removing said formed reactant mixture from said die; (d) heating said formed reactant mixture to at least the ignition temperature of said mixture to produce a net-shaped material by a combustion synthesis reaction, said material comprising alpha tricalcium phosphate or a mixture Of alpha and beta tricalcium phosphate; and (e): optionally subjecting said net-shaped material to conditions sufficient to convert at least a portion of said alpha tricalcium phosphate to beta tricalcium phosphate.

Conclusion

16. **Claims 1-10, 12, 13, 15, 17, 18, 20 and 22** are allowed.

Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY M. MARTINEZ whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Friday 9:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached at (571) 272-1358. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wayne Langel/
Primary Examiner, Art Unit 1793

BMM

/Brittany M Martinez/
Examiner, Art Unit 1793